REMARKS

Claims 1-29 are pending in this Application.
Claims 1,12,17,23,28 and 29 are the only independent claims.
Claims 1-29 stand rejected.

I. CLAIM REJECTIONS 35 U.S.C. § 102(e)

Claims 1-6, 10, 12-16, 17-22, and 23-27 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Graves U.S. Patent No. 4,994,909, filed May 4, 1989 (hereinafter "Graves"). For reasons explained hereinafter, Applicants respectfully traverse this rejection.

Applicants respectfully assert that Graves fails to anticipate the claimed features associated with dividing a data stream into substreams, marking the substreams with markers, transmitting the substreams and associated markers on separate channels (first and second channels) to a receiver, and reassembling the original data stream from the separately transmitted substreams received at the receiver based on the markers. More particularly, each of independent claims 1, 12, 17, and 23 recite that an original data stream is divided into at least two substreams. At least one marker is then associated with the respective substreams, and the substreams are transmitted to a receiver on a first and second separate channels. The substreams are received by the receiver on the first and second channels, and the receiver then reassembles the original data stream from the separately transmitted substreams using the markers. The end result

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of this process is that an original data stream is divided
into multiple data streams and transmitted across multiple
channels to a receiver, where the original data stream is
reassembled from the substreams. This process allows for
faster transmission times, as multiple substreams of the
original data stream may be transmitted simultaneously
across multiple channels to a receiver.

Graves appears to teach a video signal
distribution system, wherein a selector 220 is supplied
with 64 digitized video signals. The selector selects four
of the 64 digitized video signals, and the selected four
signals are transmitted to a multiplexer 222, where the
four signals are multiplexed with channel identifiers
representative of the four selected signals. The
multiplexed signals are then transmitted to the end user
where the transmitted signal is demultiplexed back into the
original four video signals.

However, Applicants note that Graves fails to teach or
disclose dividing an original data signal into substreams,
as recited in independent claims 1, 12, 17, and 23. As
described above, Graves does not in any way divide a data
signal into multiple substreams of data; to the contrary,
Graves appears to combine four selected video signals
together for form a single transmittable signal, and the
combined signals are then multiplexed with channel
identifiers for transmission to the end user (the receiver)
across a common channel. The channel identifiers are used
so that the receiver can separate out the original four
data signals from the combined signal once the signal is
received. Applicants submit that Graves in no way
discloses dividing a stream of data into substreams and

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separately transmitting the substreams to the receiver. Further, Applicants submit that Graves fails to teach or disclose that the substreams are transmitted to the receiver on separate data channels (the first and second data channels). In Graves, the four selected video signals appear to be multiplexed with channel identifiers and are sent over a common communication channel to the end user. Therefore, Applicants submit that Graves fails to teach or disclose each and every element recited in independent claims 1, 12, 17, and 23. As such, reconsideration and withdrawal of the rejection of independent claims 1, 12, 17, and 23, along dependent claims 2-6, 10, 13-15, 18-22, and 24-27, is respectfully requested.

Further, with regard to dependent claims 3, 15, 21, and 25, Applicants submit that Graves fails to teach or disclose each and every element recited in these dependent claims. More particularly, each of dependent claims 3, 15, 21, and 25 recite that after the original data stream is divided, marked, and transmitted by the transmitter, the original data stream is reassembled at the receiver from the first and second substreams using a detected first marker signal. Graves fails to teach dividing the original data signal into substreams of data, and as a logical result thereof, Graves also fails to teach reassembling the original data signal from the divided substreams using the marker signal. Therefore, Graves fails to teach the limitations recited in dependent claims 3, 15, 21, and 25, and reconsideration and withdrawal of the rejection of dependent claims 3, 15, 21, and 25 is respectfully requested.

In conclusion, Applicants submit that each of

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independent claims 1, 12, 17, and 23 recite subject matter that is not taught or disclosed by Graves. As such, Applicants submit that each of independent claims 1, 12, 17, and 23 are allowable over Graves. Further, since each of claims 2-6, 10, 13-16, 18-22, and 24-27 depend from one of independent claims 1, 12, 17, and 23, Applicants submit that these claims are also allowable over Graves. Therefore, reconsideration and withdrawal of the rejection of claims 1-6, 10, 12-16, 17-22, and 23-27 over Graves is respectfully requested.

II. CLAIM REJECTIONS 35 U.S.C. § 103(a)

Claims 7 and 8 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Graves in view of Widmer et al. U.S. Patent No. 5,648,776 filed April 30, 1993 (hereinafter "Widmer"). Claim 11 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Graves in view of Morikura et al. U.S. Patent No. 5,539,846 filed March 24, 1995 (hereinafter "Morikura"). Claims 9 and 28 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Graves in view of Hutchison et al. U.S. Patent No. 5,408,473 filed February 25, 1994 (hereinafter "Hutchison"). Claim 29 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Graves in view of Hutchison. Applicants respectfully traverse these rejections.

As a preliminary matter, Applicants note that each of claims 7, 8, 9, and 11 depend from independent claim 1, which, as indicated above, Applicants assert is allowable. Therefore, Applicants submit that each of

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claims 7, 8, 9, and 11 are also allowable as a result of being dependent upon claim 1. Reconsideration and withdrawal of the rejection of claims 7, 8, 9, and 11 in view of the traversal presented above is respectfully requested.

In each of the above noted §103 rejections, the Examiner relies on the premise that Graves teaches dividing an original data signal into at least 2 substreams of data, marking the substreams of data with a marker, and transmitting the substreams and associated markers to a receiver, where the original data stream is reassembled from the substreams and the markers. However, as noted above, Applicants submit that Graves fails to teach division of a data signal into substreams, marking the substreams for transmission with a data identifier, transmitting the substreams over separate channels to a receiver, or reassembling the original data signal at a receiver using the substreams and the markers.

Applicants further submit that none of Widmer, Morikura, and Hutchison, when taken either alone or in combination with any of the other cited references, teach, show, or suggest the limitations recited in claims 7, 8, 9, and 11. Specifically, none of these references teach, show, or suggest division of a data signal into substreams, marking the divided substreams for transmission with a data identifier, transmitting the divided substreams over separate channels to a receiver, or reassembling the original data signal at a receiver using the divided substreams and the data identifiers. Therefore, Applicants submit that the cited references fail to further the teaching of Graves to the level necessary to support an

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obviousness rejection of claims 7, 8, 9, and 11, as the cited combination of references fails to teach, show, or suggest each and every limitation recited in claims 7, 8, 9, and 11. Reconsideration and withdrawal of the rejection is respectfully requested.

With regard to independent claim 28, Applicants submit that the combination of Graves and Hutchison, when taken alone or in combination, fails to teach, show, or suggest each and every limitation recited in claim 28. Specifically, claim 28 recites dividing a stream of data into a plurality of substreams, wherein a first of the substreams includes first half words of each word of the stream of data and a second of the substreams includes second half words of each word of the stream of data, which is not taught, shown, or otherwise suggested by the combination of Graves and Hutchison. Further, claim 28 recites that n-1 number of substreams, where n is the total number of substreams, have a marker signal inserted into the substream before the substream is transmitted to a receiver over the respective fiber optic channels, which is also not taught, shown, or disclosed by the combination of Graves and Hutchison. Further still, claim 28 recites that once the signals are received, the marker signals are detected and the original data signal is reassembled from the substreams and marker signals, which is not taught, shown, or disclosed by the combination of Graves and Hutchison. Therefore, Applicants submit that the combination Graves and Hutchison fails to teach, show, or suggest each and every limitation recited in claim 28. As such, reconsideration and withdrawal of the rejection of claim 28 is respectfully requested.
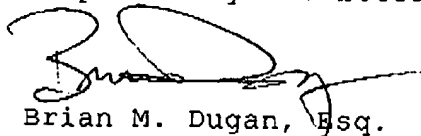
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With regard to claim 29, Applicants submit that the combination of Graves and Hutchison, when taken alone or in combination, fails to teach, show, or suggest each and every limitation recited in claim 29. Specifically, claim 29 recites that the transmitter operates to divide a stream of data into a plurality of substreams, wherein a first of the substreams includes first half of each word of the original stream of data, and a second of the substreams includes second half of each word of the original stream of data, which is not taught, shown, or suggested by the combination of Graves and Hutchison. Further, claim 29 recites that n-1 number of substreams, where n is the total number of substreams, have a marker signal inserted into the substream before the substreams are transmitted to a receiver over the respective fiber optic channels, which is also not taught, shown, or disclosed by the combination of Graves and Hutchison. Further still, claim 29 recites that once the signals are received, the marker signals are detected and the original data signal is reassembled from the substreams and marker signals, which is not taught, shown, or disclosed by the combination of Graves and Hutchison. Therefore, Applicants submit that the combination Graves and Hutchison fails to teach, show, or suggest each and every limitation recited in claim 29. As such, reconsideration and withdrawal of the rejection of claim 29 is respectfully requested.

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III. CONCLUSION

The Applicants believe all the claims are in condition for allowance, and respectfully request reconsideration and allowance of the same.

Applicants have attached the appropriate Request for Two Month Extension of Time to make this Response timely and acceptable to the Office. If for any reason the attached Request is defective or does not meet a requirement of the Office, Applicants request that the Office accept this paragraph as a Request for Extension of Time and authorization to charge the requisite extension fee to Counsel's Deposit Account No. 04-1696. Applicants do not believe any other fees are due regarding this amendment. If any other fees are required, however, please charge Counsel's Deposit Account No. 04-1696. The Applicants encourage the Examiner to telephone Applicants' attorney should any issues remain.

Respectfully Submitted,

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